

Listing of the Claims:

1. (Currently Amended) A reaction surface array diagnostic apparatus comprising:

at least one substrate with a plurality of reaction surfaces predeposited in microtiter well spaced bound arrays;

at least one a-plate having a plurality of wells extending therethrough in microtiter well spacing;

a gasket means for fluidically sealing the plate to the substrate, the gasket means having microtiter well spaced wells fluidically coupled to the wells in the plate and combining with the wells in the plate to form reaction chambers about the reaction surfaces on the substrate; and

clamp means for clamping a pair of C-shaped clamps engaging opposed edges of the plate, the gasket means and the substrate together such that the gasket means is compressed to form fluid tight reaction chambers about the reaction surfaces, the clamps compressing the gasket between the plate and the substrate.

2. (Cancelled)

3. (Currently Amended) The apparatus of claim 1 further comprising:

at least one open ended aperture formed in the plate; and

a projection extending from at least one of the clamp members- clamps and releasably engagable with the recess to releasably fix the clamp member to the plate.

4. (Currently Amended) The apparatus of claim 1 wherein the clamp means comprises clamps comprise:

a pair of opposed clamp members, each clamp member defining a C-shaped member with two spaced legs extending in the same direction from opposite ends of a central wall.

5. (Currently Amended) The apparatus of claim 4 wherein:
the legs and the central wall define a channel for receiving a stacked stack
arrangement of the substrate, the gasket and the plate.

6. (Currently Amended) The apparatus of claim 4 further comprising:
an array formed of a plurality of side-by-side arranged stacks, each stack
individually joined by clamp members, the array having a foot print of a microtitre plate each
pair of clamp defined by the wells in each stack maintaining a microtiter plate well spacing
across the array.

7. (Original) The apparatus of claim 6 further comprising:
a tray having an opening for receiving and supporting the array.

8. (Original) The apparatus of claim 7 further comprising:
a sloped surface formed along one edge of the tray for guiding the array into the
tray.

9. (Original) The apparatus of claim 6 wherein:
two adjacent clamp members of two side-by-side disposed stacks have abutting
central walls.

10. (Original) The apparatus of claim 1 further comprising:
a non-releasable adhesive fixedly joining the gasket to the plate;

11. (Cancelled)

12. (Cancelled)

13. (Cancelled)

14. (Cancelled)

15. (Cancelled)

16. (Cancelled)

17. (Cancelled)

18. (Cancelled)

19. (Cancelled)

20. (Cancelled)

21. (Withdrawn) A reaction surface array diagnostic apparatus for use with a microtitre plate sized substrate carrying a plurality of reaction surfaces arranged in microtitre plate well spacing, the apparatus comprising:

a microtitre plate having a plurality of spaced wells, the microtitre plate formed of a flexible material; and

means, on one surface of the microtitre plate, for joining the microtitre plate to a substrate.

22. (Withdrawn) The apparatus of claim 21 wherein:

the microtitre plate is formed of silicone.

23. (Withdrawn) The apparatus of claim 21 wherein:

the microtitre plate has exterior dimension of about 86mm x 128mm.

24. (Withdrawn) The apparatus of claim 22 wherein the joining means comprises:

a releasable adhesive for releasably joining the microtitre plate to a substrate.

25. (Withdrawn) The apparatus of claim 24 further comprising:
a glass substrate.

26. (Withdrawn) The apparatus of claim 21 wherein:
the microtitre plate is formed of a compressible material.

27. (Withdrawn) The apparatus of claim 22 wherein the joining means
comprises:
an electrostatic force formed between one surface of the silicone formed microtitre
plate and the substrate.

28. (Withdrawn) The apparatus of claim 21 further comprising:
a single substrate.

29. (Withdrawn) The apparatus of claim 21 wherein:
the substrates comprises a plurality of substrates joined to the microtitre plate.

30. (Withdrawn) The apparatus of claim 21 further comprising:
a pad carried on one surface of the microtitre plate peripherally surrounding the
wells.

31. (Withdrawn) The apparatus of claim 30 wherein:
the pad defines a recess over the one surface of the microtitre plate.

32. (Withdrawn) The apparatus of claim 32 wherein:
the pad is homogeneously formed with the microtitre plate.

33. (Withdrawn) The apparatus of claim 31 wherein:
the pad defines a separate member from the plate; and
means for joining the pad to the plate is disposed between the pad and the plate.

34. (Withdrawn) The apparatus of claim 33 wherein the joining means comprises:

a permanent, non-releasable adhesive.

35. (Withdrawn) The apparatus of claim 34 wherein the adhesive comprises:
a double sided silicone/acrylic tape.

36. (Withdrawn) The apparatus of claim 33 wherein:
the joining means comprises non-mechanical, non chemical adhesive, short range
acting force between the plate and the pad where the plate and the pad are formed of silicone.

37. (Withdrawn) The apparatus of claim 30 wherein:
the lip is thicker than the substrate.